

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: KIM, Min-won

SERIAL NO.: 10/579,365

ART UNIT: 4153

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EXAMINER: Mellon, D. C.

TITLE: FLUID FLOW INTERRUPTION MEANS FOR FILTER OF WATER PURIFIER

Amendment B: REMARKS

Upon entry of the present amendments and remarks, reconsideration of the rejections is respectfully requested. The present amendments have been entered for the purpose of more clearly distinguishing the present invention from the prior art and also for the purpose of placing the claim language into a more proper U.S. format.

In the Final Office Action of February 27, 2009, Claim 3 was objected to because of a typographical error. Claims 3 and 4 were rejected under 35 U.S.C. § 112, first paragraph, for failure to comply with the written description requirement. Claims 3 and 4 were rejected based on 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claims the subject which applicant regards as the invention. Claims 3 and 4 were rejected under 35 U.S.C. § 102(b) as anticipated by Reid et al (USP 5,591,332).

As an overview to the present reply, Applicant has amended Claim 3. Applicant believes the amendment to Claim 3 traverses all of the objections and rejections set forth in the Office Action and makes Claims 3 and 4 allowable.

I. Amended Claim 3 Traverses the Claim Objections.

Applicant has amended Claim 3 to correct a typographical error. Particularly, the word “deceasing” has been corrected to “decreasing” per the Examiner’s instruction.

II. Amended Claim 3 Traverses the 35 U.S.C. § 112, First Paragraph, Rejection

The Final Office Action indicates that the recitation of “O-ring being movable so as to close said guide passage” in Claim 3 is considered new matter, and Claims 3 and 4 thus violate the written description requirement. Applicant has amended Claim 3 to delete the phrase “O-ring being movable so as to close said guide passage so as to interrupt a flow of fluid therethrough.” Thus, Applicant has traversed the new matter rejection, and Claims 3 and 4 are in allowable form in this respect.

III. Amended Claim 3 Traverses the 35 U.S.C. § 112, Second Paragraph, Rejection

The Final Office Action indicates the phrase “O-ring being movable so as to close said guide passage” in Claim 3 is indefinite because it is not understood whether the O-ring itself moves to close the guide passage or whether the fluid flow interrupting means which has the O-ring affixed to it is moved. Applicant has amended Claim 3 to delete the phrase “O-ring being movable so as to close said guide passage so as to interrupt a flow of fluid therethrough.” Thus, Applicant has traverse the 35 U.S.C. § 112, second paragraph, rejection with regard to this phrase, and Claims 3 and 4 are in allowable form.

The Final Office Action indicates the term “outlet” in Claim 3 lacks antecedent basis. Applicant has amended Claim 3 to add the word “port” after the term “outlet.” The term at issue is now “outlet port”, which has proper antecedent basis in amended Claim 3. Therefore, Applicant traverses the 35 U.S.C. § 112, second paragraph, rejection with regard to this term, and Claims 3 and

4 are in allowable form.

IV. Amended Claim 3 Traverses the 35 U.S.C. § 102(b) Rejection

The Final Office Action indicates that Reid et al. anticipates the present invention. Applicant has amended Claim 3 to traverse the 102(b) rejection. First, the opening and closing body 320 of the fluid flow interrupter 300 has a downward tapered shape (gradually decreasing diameter) with the O-ring 321 fitted thereover and controllably opens and closes the guide passage 120 because of the elasticity of the elastic spring 400. The stem 20 of Reid et al. does not have a downward tapered shape and instead has an O-ring in the lower part thereof so as to control the flow of fluid using the elasticity of an elastic spring. Thus, the construction of the guide rod present invention is different from that of Reid et al.

Second, the Applicant has limited Claim 3 so that the fluid guide rod is suitable for guiding fluid therearound. In contrast, Figs. 2-4 of Reid et al. show a fluid guide rod 20 that has elongated holes 108 formed therein so that fluid can flow through the fluid guide rod 20, as opposed to around the guide rod (Reid et al., Figs. 2-4, C6/L8-9). The holes 108 are suitable for fluid flow through the guide rod, not around. Fig. 5 of Reid et al. shows a fluid guide rod 20 with channels 113 formed therein so that fluid can flow into the guide rod 20 through the channels 113. The channels 113 are suitable for fluid flow in the guide rod, not around. Reid et al. thus teaches and suggests a guide rod where fluid flows therein and therethrough. Applicant's invention has no such channels or holes (see figures), and the added limitation in amended Claim 3 distinguishes the invention over Reid et al. The Applicant's specification supports this amendment: "... service water, which is introduced into the head 100 through the inlet port 110, flows through the space defined between the guide passage 120 and the fluid guide rod 210 which is inserted into the hollow cylindrical protuberance 121."

(Applicant's Specification, Paragraph [0027]). The specification thus states that fluid flows between the guide passage 120 and the guide rod 210 and specifically does not mention fluid flowing through or in the guide rod.

Third, Applicant has limited Claim 3 so that the elastic spring is supported by the hollow cylindrical protuberance. In the figures of Applicant's invention, the hollow cylindrical protuberance 121 is formed on the side surface of the guide passage 120. The end of the elastic spring 400 is supported by the protuberance 121. In contrast, the end of the spring 22 in Fig. 2 of Reid et al. is supported by the top plate 10 of the guide rod 20. Applicant's structure is thus distinguishable from Reid et al., and is therefore not anticipated by Reid et al.

Fourth, Applicant disagrees with the Final Office Action, on page 5, that the elastic spring of Reid et al. has another end that fits around the hollow protuberance. In Fig. 2 of Reid et al., the protuberance 18 fits around the spring 22. This is in direct contrast to Claim 3, which requires that the elastic spring fit around the hollow protuberance. The configuration of the spring can be seen in the figures of the present application. The configuration of the spring is also discussed in the specification of the present application: "The elastic spring 400 has one end through which the fluid guide rod 310 of the fluid flow interrupter 300 is inserted and another end which is fitted around the hollow cylindrical protuberance 121." (Applicant's Specification, Paragraph [0020]) (emphasis added).

Amended Claim 3 is distinguishable from Reid et al. because the guide rod of Reid et al. does not downwardly taper, the guide rod of Reid et al. has holes and channels formed therein whereas the guide rod of the present invention does not, the elastic spring in Reid et al. is supported by a plate of the guide rod and not by the hollow protuberance, and the spring of Reid et al. fits around the

hollow protuberance and not within. All of the distinguishing features in the above arguments can be seen in the figures of the Applicant's application, therefore, no new matter is added by the amendments to Claim 3. Applicant therefore respectfully traverses the 102(b) rejection.

V. Dependent Claim 4 is Allowable in Light of Amendments to Claim 3

Applicant has amended Claim 3 to traverse the rejections presented in the Final Office Action. Therefore, Applicant believes Claim 3 is now allowable. Because Claim 4 is dependent upon Claim 3, Claim 4 is also in allowable form.

VI. Conclusion

Based upon the foregoing analysis, Applicant contends that Claims 3 and 4 are in proper condition for allowance. Applicant believes that all objections and rejections of Claims 3 and 4 are traversed in light of amended Claim 3. Reconsideration of the rejections and allowance of the claims at an early date is earnestly solicited. Since no new claims have been added above those originally paid for, no additional fee is required.

Respectfully submitted,

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Date

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